

Notice of Allowability

Application No.

09/677,478

Examiner

Lan Vinh

Applicant(s)

BLALOCK ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to The RCE and respose filed on 6/26/2006.
2. ☒ The allowed claim(s) is/are 1-3,6,7,10-13,16-19,21-28,30,32,33,36-42,44,46-48,50 and 53-94.
3. ☒ The drawings filed on 02 October 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 62606 10/02/00
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Lan Vinh
AU 1765



Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/26/2006 has been entered.

Allowable Subject Matter

2. Claims 1-3, 6-7, 10-13, 16-19, 21-28, 30, 32-33, 36-42, 44, 46, 47-48, 50, 53, 54-94 allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the applicants have presented a persuasive argument, presented in an interview conducted on 6/23/2006, that the combination of Ding (US 5,814,563) and Sahin (6,465,051) fails to disclose or suggest " wherein the gas comprises O₂, and wherein the hydrogen component and O₂ are provided in the chamber during the plasma etching at a volumetric ratio of the one to the another of at least 0.1:1 of O₂ to the hydrogen component. Thus, the previous final rejection(s) (mailing date 1/26/2006) of claims 1-3,6-7,80-87 based on Ding and Sahin have been withdrawn

Regarding claim 10, the applicants have presented a persuasive argument, presented in an interview conducted on 6/23/2006, that the combination of Ding (US

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5,814,563) and Sahin (6,465,051) fails to disclose or suggest "wherein the gas comprises a gas comprises an oxygen component forming an oxygen and carbon compound mixture, and wherein the carbon compound is provided at from about 5% to about 80% by volume of the oxygen and carbon compound mixture". Thus the previous final rejection(s) (mailing date 1/26/2006) of claims 10-13, 16-19, 81, 88 based on Ding and Sahin have been withdrawn

The reason(s) for allowance of claims 21, 59 have been stated in the previous office action (paper 030604)

Regarding claim 36, the cited prior art of record fail to disclose or suggest a step of 'after the first plasma etching and with the wafer on the wafer receiver, second plasma etching at subatmospheric pressure using a gas having one or more components effective to etch photoresist from the wafer and polymer from chamber internal surface and getter halogen liberated from the polymer to restrict further etching of the material on the semiconductor wafer during the second plasma etching, the gas having the one or more components comprising at least H₂ and CH₄, in combination with the rest of the limitations of claim 36

Regarding claims 47, 54-57, 84-85, 91-92, the applicants have presented a persuasive argument, presented in an interview conducted on 6/23/2006, that Ding (US 5,814,563) does not teach or suggest a second plasma etching. Thus the final previous rejection(s) (mailing date 1/26/2006) of claims 47, 53, 54-57 based on Ding have been withdrawn

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Vinh whose telephone number is 571 272 1471. The examiner can normally be reached on M-F 8:30-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571 272 1465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LV
August 17, 2006